

Division of Chemistry

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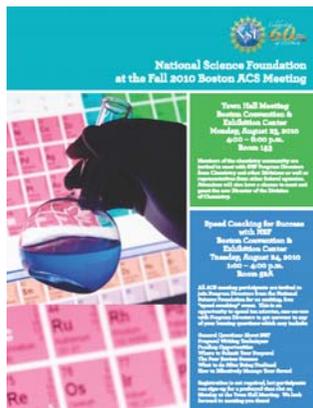
NSF at ACS National Meeting in Boston August 2010

The NSF Division of Chemistry (CHE) is organizing two events at this fall's American Chemical Society National Meeting in Boston.

The traditional town hall meeting will be held by CHE on Monday, August 23rd from 4:00-6:00pm at the Boston Convention and Exhibition Center, Room 153. During this event CHE will introduce the new Chemistry Division Director, Dr. Matthew Platz. There will also be opportunities to meet others in the chemistry community, representatives from the National Science Foundation, and representatives from other government agencies including the National Institute of Health, the Department of Energy, and the U.S. Army Research Laboratory.

For the second event, we are proud to bring to you the first ever NSF Speed Coaching Event, titled *Speed Coaching for Success with NSF*. This event will take place Tuesday, August 24th from 1:00-4:00 pm at the Boston Convention and Exhibition Center, Room 52A and is open to all ACS meeting attendees. A number of Program Officers from NSF and from programs within CHE will be present to answer your most burning questions during a one-on-one, ten minute session. If you are interested in tips on techniques for writing proposals, NSF funding opportunities, the peer review process, which program to submit your proposal to, and more, then join us for this exciting new event. To ensure that you do meet with a Program Officer, sign up Monday at the town hall meeting or during the event Tuesday.

We hope to see you at the meeting!



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Recognition of Chemistry Principal Investigators

by Zeev Rosenzweig

Jack W. Szostak – Nobel Prize in Physiology or Medicine

The Division of Chemistry extends its congratulations to Nobel Laureate Dr. Jack Szostak in honor of his 2009 Nobel Prize in Physiology or Medicine. Szostak shared the Nobel Prize in Physiology or Medicine with Carol W. Greider and Elizabeth H. Blackburn “*for the discovery of how chromosomes are protected by telomeres and the enzyme telomerase*”. Together they have solved a major problem in biology: how chromosomes can be copied in a complete way during cell divisions and how they are protected against degradation. The Nobel Laureates have shown that the solution is to be found in the ends of the chromosomes--the telomeres--and in an enzyme that forms them--telomerase. The discoveries by Blackburn, Greider and Szostak have added a new dimension to our



Please see *Recognition* on page 3

Farewell Letter from Dr. Luis Echegoyen

It has been a great and distinct pleasure to serve as the Division Director for the Division of Chemistry for the last four years. This period has been interesting and challenging, as well as full of successes and many rewarding moments. I would like to take this ending of my appointment to provide a brief retrospective look, focusing on what I believe are some of the most significant achievements of the Division of Chemistry during the last four years.

Of the many accomplishments the Division of Chemistry had in recent years, perhaps the most important is the increase in the budget. In FY 2006, our divisional budget was \$180.70M while the current FY 2010 budget is \$233.73 M, representing an increase of 30%. Other divisions within the Directorate of Mathematical and Physical Sciences (MPS) also received increases during this period but CHE experienced the largest percentage increase in the directorate. I am proud to have led CHE through this budget expansion period. It is my hope this expansion will continue in the future.

The Division has remained committed to investing in chemical discovery, while simultaneously advancing chemistry education and contributing to America's competitive edge. During the last four years we supported a wide variety of significant workshops, from fundamental science at the intellectual frontier, to workforce development, and innovation. Some of these workshops include: i) *Complexity and Emergent Phenomena in Chemistry*, May 14-15, 2007, ii) *Workshop on Excellence Empowered by a Diverse Academic Workforce: Achieving Racial and Ethnic Equity in Chemistry*, September 24-26, 2007 iii) *Reversing Global Warming: Chemical Recycling and Utilization of CO₂*, July 9-10, 2008, iv) *Cyber-enabled Instruments Workshop*, July 16-18, 2008, and v) *Workshop on Excellence Empowered by a Diverse Academic Workforce: Chemists, Chemical Engineers & Materials Scientists with Disabilities*, February 8-10, 2009.

The past four years have also brought about exciting developments in programmatic activities. The SOLAR Energy Initiative, a collaborative program between the Divisions of Chemistry, Material Research, and Mathematics, was initiated two years ago to support interdisciplinary efforts by groups of researchers to address the scientific challenges of highly efficient harvesting, conversion, and storage of solar energy. This program has been received very well by these communities, as evidenced by the more than one hundred proposals submitted for the most recent SOLAR solicitation. A new program started in 2010, the Chemistry and Materials Research at the Interface between Science and Art (SCIART), was designed to enhance opportunities for collaborative activities between conservation scientists and chemists and materials scientists to address grand challenges in the field of science and cultural heritage. Two years ago, the American Competitiveness in Chemistry Fellowship program was initiated to support postdoctoral associates in chemistry. This program seeks to build ties between academic and industrial, and/or national laboratory, and/or Chemistry Division-funded center researchers (partners) and to involve



scientists starting out on their research careers in efforts to broaden participation in chemistry.

The Centers for Chemical Innovation (CCI) program, supporting research centers focused on major, long-term fundamental chemical research grand challenges, has become an important component of the Division's portfolio. The CCI Program supports both Phase I (development) and Phase II (full Center implementation) awards. Currently there are eight Phase I Centers, with each center receiving a total of \$1.5M for three years, and three Phase II Centers (with an additional Phase II Center currently pending approval) each receiving \$4M per year for five years, renewable to ten years. Another program, the International Collaboration in Chemistry program (ICC), initiated in 2006, was developed to enhance opportunities for collaborative research between U.S. and foreign investigators. This program is uniquely managed and has provided 56 awards since its inception in 2008, growing from collaborations with one country to ten countries throughout Europe and Asia.

Besides developing a comprehensive strategic directions document in 2008, the Division underwent a major realignment in 2009, with a new programmatic structure designed to better reflect the way chemical research is carried out by the community, not how it is taught in the classrooms. In the near future this realignment will be assessed; preliminary feedback is especially positive although still anecdotal.

I would like to take this opportunity to thank the chemistry representatives on the MPS Advisory Committee, those who participated in this year's Committee of Visitors, and the Committee's Chair, Cindy Burrows. I want to especially thank the reviewing community, without whose invaluable help it would be impossible to conduct NSF's mission.

Finally, I would like to thank the staff of the Chemistry Division for their dedication and hard work. The community is very fortunate to have such a professional and hard working group whose interest is to support the most outstanding fundamental science in our field. Thanks to all of you for your support and encouragement during the last four years.

Sincerely,
Luis Echegoyen

Recognition of Chemistry Principal Investigators from Page 1

understanding of the cell, shed light on disease mechanisms, and stimulated the development of potential new therapies. Professor Szostak is currently supported by the Chemistry Division and the Division of Molecular & Cellular Biosciences for “Self-Replicating Nucleic Acids” (CHE-0809413) to work on the chemical synthesis of polymers that can both carry information in their sequence and replicate that information chemically without using enzymes.

Presidential Early Career Awards for Scientists and Engineers (PECASE)

PECASE awards represent the highest honor that a beginning scientist or engineer can receive in the United States. It provides recognition of their potential for leadership across the frontiers of scientific knowledge during the 21st century. NSF PECASE awardees are selected from the pool of individuals who received five-year grants through the Faculty Early Career Development (CAREER) Program. PECASE recipients received their awards from President Barack Obama at the White House on January 13, 2010. The Division of Chemistry would like to recognize and congratulate the following Division-supported recipients of the 2008 PECASE award:

Dr. Zuzanna Siwy (Associate Professor of Physics & Astronomy, University of California-Irvine) – recognized for her research in the invention of nanoporous ionic diodes leading a frontier of new nanochemical devices ranging from protein biosensors and nanopore ion-pumps, to a new type of transistor, and for her dedication to outreach to middle, high school, undergraduate and graduate students to inspire a new generation of interdisciplinary scientists. CAREER award (CHE-0747237 - “Nanoporous Ionic Diodes and Ionic Transistors”).

Dr. John Herbert (Assistant Professor of Chemistry, Ohio State University) – recognized for his work in developing novel algorithms for the simulation of electronically-excited states consisting of hundreds of atoms and for applying these techniques to the characterization of photochemical processes in DNA. He is additionally recognized for his work in developing open-ended research projects to be integrated into undergraduate teaching laboratories. CAREER Award (CHE-0748448: “Characterization of excited electronic states of DNA using novel algorithms based on time-dependent density functional theory”).



PECASE award winners with President Barack Obama at the White House.

Strategic Directions Update

by Amy M. Jacobson

In the year following the last CHE COV in 2007, CHE staff developed a strategic plan with significant input from the research community, stakeholders, partners, and NSF staff. The full strategic plan can be found at http://www.nsf.gov/mps/che/CHE_StrategicDirections.pdf. What follows is a brief update on our progress to date.

Increasing Global Engagement

In a partnership with the NSF Office of International Science and Engineering (OISE), CHE initiated and expanded the International Collaboration in Chemistry program in collaboration with Germany, China, the United Kingdom, France and Austria between 2007 and 2009. During that time, 51 collaborative projects were funded by CHE, resulting in a US investment of \$22.5M (the corresponding investments by the partner countries are not included). CHE also co-sponsored OISE-led Partnerships in International Research and Education in chemistry. Japan, Russia, Poland, Luxembourg and Spain were added to the ICC program in FY2010, and the Netherlands is expected to be added in FY2011.

CHE encourages US students to gain global experience by going abroad for part of their study by sending REU students to Asia, Europe and South America (~170 students conducted undergraduate research in 10 countries during 2007-2009). CHE is also engaged with the community in preparing for the International Year of Chemistry in 2011.

Broadening Participation

CHE sponsored (with DOE and NIH) a series of broadening participation workshops for top-50 department chairs (Gender in 2006, Minorities in 2007 and Person with Disabilities in 2009). Each of these workshops has produced a report for the community which serves to inform about CHE's future efforts.

Please see *Strategic Directions* on page 7



Extraordinary Access

by Kathy Covert

Have you wondered what NSF files on CHE proposals look like and how decisions are made? A team of 34 chemists, led by Dr. Cynthia Burrows of the University of Utah, found out during their recent *Committee of Visitors* (COV) review. The COV examined NSF Chemistry's files and actions over three recent fiscal years (FY 2007-2009) and then provided their findings and recommendations.

Key Highlights from the COV Report:

- The proposals being funded by CHE are deemed to be of high quality and at the leading edge of chemistry disciplines. The research portfolio has the potential to greatly impact several of the MPS Grand Challenges. The programs support research directed at a wide range of crucial national priorities including energy, medicine, materials and the environment. Regrettably, much excellent science remains unfunded or underfunded, and the COV looks forward to a budget doubling at NSF to help ameliorate this situation.
- In general, the Program Officers are doing an outstanding job of making difficult decisions for applications at the borderline. The process generally goes beyond a single PO, and involves a group of POs reaching a consensus on an application.
- The COV found that Program Officers are doing an excellent job of identifying reviewers of the appropriate expertise and with a good balance of geographical and institutional characteristics, at least among academic reviewers. Several programs noted that greater use of industrial and national laboratory scientists could be made, and this might help alleviate the problem of lack of response from a large fraction of academic reviewers. In particular, it was noted that the more senior members of the community were less participatory in the review process.
- Most programs were found to have an appropriate mix of multidisciplinary science, and the POs have demonstrated willingness to encourage investigators in new areas and those willing to take risks.
- However, funding for outstanding research in the core of the discipline is essential, because many major advances come from long-term scholarly and thorough investigations. This type of research should remain as the key emphasis of programs. There is a danger of funding trendy and weak research in the name of transformative science, but program officers are doing a good job of balancing these factors.
- The CHE portfolio includes a large fraction of CAREER awards, and COV commends the actions of POs to include a vibrant group of young investigators. The success rates of PIs from underrepresented groups appear to be very similar to the average, and the slow but steady growth of these groups is encouraging. The support of workshops on equity issues related to gender, minorities, and persons with disabilities is highly commendable.
- The international component of the CHE portfolio has also increased substantially in the past 3 years, and the Division Director's efforts in this area are highly commendable.
- CHE supports fundamental science and discovery in the broad discipline of chemistry for the US. This is not a top-down driven process and projects are not selected based on application area or area of impact.
- However, out of the diverse portfolio of CHE-funded projects has sprung high impact science in application areas that are identified as critical to national priorities. These are fundamental groundbreaking studies that end up furthering knowledge and pushing discovery in relevant and broadly multidisciplinary application areas.
- The Chemistry Division wisely invested a significant proportion of ARRA funds on instrumentation facilities and development which will have a long-term and broad-based impact on scientific discoveries.
- Ready access to high-field NMR and mass spectrometers and x-ray diffractometers is vital for accelerating new molecular discoveries. Programs such CRIF and MRI fund instrumentation that advance current research, and provides instruction and training for the next generation of scientists at a diverse set of institutions. In addition, CHE successfully competed within NSF for an additional \$15M of ARRA funding for an ICR MS facility addition to the NHMFL.

Important NSF Proposal Requirements

by C. Renee Wilkerson

Postdoctoral Researcher Mentoring Plan

Proposers are reminded to include, as a supplementary document, a description of the mentoring activities that will be provided for postdoctoral researchers for *each* proposal that requests funding to support them. The mentoring plan, in no more than one page, should describe the mentoring that will be provided to all postdoctoral researchers supported by the project. Failure to include the requisite mentoring plan will result in the proposal being returned without review. See the [Grant Proposal Guide](#) for additional information.

Project Outcomes Report for the General Public

Proposals submitted or updated (e.g. supplements or continuing grant increments) after January 4, 2010 require a project outcomes report for the general public within 90 days following expiration of the grant. This report will serve as a brief summary, for the public, of the nature and outcomes of the project. The public outcomes report should address the intellectual merit and broader impacts of the work while providing a brief description of the project's results for the lay reader. Information regarding anticipated publication of project results, as well as any other information that would be of interest to the public also may be included in this section. See the [Proposal and Award Policies and Procedures Guide](#) for additional details.

Forthcoming NSF Data Management Plan

The National Science Board recently announced a change in the implementation of the existing policy on sharing research data. Around October 2010, NSF is planning to announce the requirement that all proposals include a data management plan in the form of a two-page supplementary document with implementation of this request for proposals in early 2011. The research community will be informed of the specifics of the anticipated changes and the agency's expectation for the data management plans in the coming months. For additional information see the May 10, 2010 [NSF Press Release 10-077](#).

Results from Prior NSF Support

Proposers are reminded that if any PI or co-PI identified on a proposal has received NSF funding in the past five years from any NSF office, information on the award(s) is required. Each PI and co-PI who has received more than one award (excluding amendments) must report on the award most closely related to the proposal. Failure to include results from prior NSF support will result in the proposal being returned without review. See the [Proposal and Award Policies and Procedures Guide](#) for additional details.

URGENT Request – Proposal Reviews

by Kelsey Cook and Elias Muñoz

On February 18, Luis Echegoyen sent a Dear Colleague letter to the Chemistry community, with the plea that heads this article. He was driven to this by a perfect storm of converging circumstances, including increasing proposal and review pressure, and an increasing engagement of chemists with industry and Federal mission agencies like NIH, DOE, and DOD.

Some relevant observations and consequences: 1) NSF CHE proposal pressure increased 26% in FY 2010 over FY 2009. 2) The response rate to ad hoc review requests has gradually but steadily declined. Despite excluding requests to known non-responders, currently the response rate is at a 60% average. 3) CHE has relied more than most of NSF on ad hoc review, in the belief that our disciplinary diversity is best served by specifically targeted reviewers. With declining response rates and increasing proposal pressure, our ability to exploit tailored review is being compromised; the fraction of proposals undergoing ad hoc review declined from 61% in FY 2007 to 40% in FY 2009.

To reiterate Luis' February plea, if you can, please review, even if your research support comes from elsewhere - we are trying to move our discipline (and yours!) forward in ways likely to transform the way you do science. We are especially grateful to those foreign, industrial, and government reviewers whose sense of duty to the community prompts good citizenship despite being ineligible for NSF support. If you are unable to review, please let us know quickly so that we can find an alternate reviewer. It would be very helpful if you could suggest one or more alternates who may be able to review instead. Better yet, of course, please review! And to those who do, THANKS!

What Do You Think?

If you have an idea for a newsletter article, send it to:

chemplans@nsf.gov

Notable Funding Opportunities

by C. Renee Wilkerson

The Division would like to remind the chemistry community about a few funding opportunities for research and education support. The Directorate for Mathematical and Physical Sciences and the Directorate for Social, Behavioral, and Economic Sciences have partnered to announce a call for proposals to assess the impact of the chemical sciences in the United States. A recent Dear Colleague Letter ([NSF 10-054](#)) outlines areas of research interest towards developing “science of science policy tools” to better document scientific achievement and scientific outcomes in the chemical sciences. Full proposals are to be submitted to and evaluated by the **Science of Science and Innovation Policy** (SciSIP) program and are due September 9, 2010. Interested investigators are urged to contact a SciSIP program director for additional information and details.

Research Coordination Networks (RCN) are intended to advance a field or create new directions in research or education. Groups of investigators will be supported to communicate and coordinate their research, training and educational activities across disciplinary, organizational, geographic and international boundaries. A targeted track within RCN at the physical/life science (RCN-PLS) interface focuses on topics at the interface of the biological and either the mathematical or physical sciences. Proposals at this interface should address research that would be significantly advanced through a synergistic approach, requiring the expertise of both biologists and mathematical or physical scientists. Such proposals are expected to involve a balance of researchers from two or more disciplines, at least one in the biological sciences and one in the mathematical or physical sciences. Full proposals for the RCN-PLS targeted track are due August 18, 2010. Please see the program announcement, NSF 10-566, [Research Coordination Networks](#) for program contacts and additional information.

The **EAGER** (EARly-concept Grants for Exploratory Research) funding mechanism may be used to support exploratory work in its early stages on untested, but potentially transformative, research ideas or approaches. These exploratory proposals may be submitted directly to an NSF program at anytime, but the EAGER mechanism should not be used for projects that are appropriate for submission as “regular” NSF proposals. Work proposed in an EAGER proposal may be considered “high risk-high payoff”, involve radically different approaches, apply new expertise, or engage novel disciplinary or interdisciplinary perspectives. Contact the program director most germane to the topic prior to submission of an EAGER proposal.

Please see *Notable Funding Opportunities* on page 9

Staff Changes in the Division of Chemistry

by Maxine Jefferson-Brown and Debbie Jones

The Division would like to wish Dr. Luis Echegoyen, Dr. Wilfredo Colon, and Dr. Janice Hicks farewell as they depart the Division of Chemistry. Dr. Echegoyen recently joined the University of Texas at El Paso, as the Welch Chair in Chemistry. Dr. Wilfredo Colon will return the Rensselaer Polytechnic Institute as an Associate Professor. Dr. Janice Hicks joined the Division of Materials Research as the Deputy Division Director. The Division of Chemistry wishes them continued success.

The Division welcomes the distinguished scientists who will be joining the Division of Chemistry soon. Dr. M. Josephine Yuen, a Program Director from the Division of Industrial Innovation & Partnerships will join the Chemistry Centers Program (CCI); Dr. David Berkowitz, Professor of Chemistry at the University of Nebraska-Lincoln will join the Chemical Synthesis (SYN) and Chemistry of Life Processes (CLP) Programs. The Division also welcomes two Program Specialists to the Program Support Team: Amy Jacobson and Vanessa Simon. In their role as Program Specialists, Ms. Jacobson and Ms. Simon will provide administrative program support for end-to-end merit review and award management and oversight processes.

In addition to the staff changes mentioned above, the Division of Chemistry will be gaining a new Division Director. Dr. Matthew Platz has been appointed as the new Division Director, for the Division of Chemistry. Dr. Platz was born in Bronx, New York and obtained B.Sc. degrees in chemistry and mathematics from the State University of New York at Albany in 1973, and a Ph.D. in chemistry from Yale University in 1977. Following a post doctoral year at the University of Chicago, he joined the faculty of The Ohio State University as an Assistant Professor of Chemistry in 1978. Dr. Platz was promoted to Associate Professor in 1984, to full Professor in 1990 and served as Department Chair from 1994-1999. He has won university awards for distinguished teaching and research and in 2001 he was named Distinguished University Professor of Chemistry.

Dr. Platz maintains an active research laboratory, which is funded by the National Science Foundation and the National Institutes of Health. A common theme is the use of photochemical techniques to generate and study highly reactive intermediates such as carbenes and nitrenes. His research has been recognized by the Cope Scholar award of the American Chemical Society and the Remsen Award.

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From *Staff Changes* on page 6

He has mentored well over a hundred undergraduate, graduate and post doctoral research students, published over 280 peer reviewed papers, edited two books, delivered over 200 invited lectures, and holds over a dozen patents. He has served as Chair of the Department of Chemistry, joined The Office of Academic Affairs as a Faculty Fellow on August 1, 2005, and on July 1, 2006 became Vice Provost for Academic Policy and Faculty Resources at The Ohio State University. In August 2007, he became Interim Dean of the College of Mathematical and Physical Sciences, and in July 2008 became Interim Dean of the College of Biological Sciences as well.

Matt and Joan Platz recently celebrated their 37th wedding anniversary and look forward to many more. They have three grown children with undergraduate degrees from The Ohio State University.

From *Strategic Directions* on page 3

CHE has encouraged the academic community to develop departmental plans for broadening participation and now requires (as of 2008) the department plan as part of all its CRIF-MU proposals. ACC-Fellows proposals also contain plans for broadening participation.

CHE sponsors COACH, an organization working to advance women in academic chemistry departments. More recently, COACH expanded to other disciplines such as physics and materials, and to other countries.

REU sites are actively working to broaden the participation of talented undergraduates from underrepresented groups. The sites have varying strategies including strategic recruiting, partnering with minority-serving institutions, and partnering with Louis Stokes Alliances for Minority Participation. These partnerships have resulted in a cohort of 650 REU-supported undergraduates per summer, with 51% female participants and 30% from underrepresented groups.

CHE has its own plan for broadening participation on the CHE website <http://www.nsf.gov/pubs/2007/nsf07021/nsf07021.pdf>, and reports yearly to the MPS leadership and to the Division on outcomes. CHE developed a panel presentation on implicit bias in evaluation that is presented to every CHE panel and has been adopted by many other NSF divisions.

Addressing Funding Needs of Investigators across Career Stages

The community voiced concerns about possible

Graduate Research Fellowship Program (GRFP)

2010 Quick Stats:

- Over 12,000 applications received
- 2,000 Awards and 2,026 Honorable Mentions
- 17% success rate
- Award for up to \$121,500 per Fellowship

Eligibility:

- U.S. Citizen, National or Permanent Resident Pursuing research-based MS or PhD in a NSF-supported discipline
- Early career: senior undergraduate through First/second year graduate students

Award Details:

- Support: Three years over a five-year period
- Annual stipend: \$30,000
- Annual cost-of-education allowance paid to Institution: \$10,500
- One time international travel allowance: \$1,000
- Cyberinfrastructure access: TeraGrid
- Service requirement: None
- Portable: any accredited graduate institution in US or abroad in NSF-supported discipline
- Flexible: choice of project, advisor, department and institution in an NSF-supported discipline

Applications are typically due in early November. Please check the NSF website for details.

underrepresentation of Mid-Career Faculty (MCF, 10-25 years post-PhD) awardees proportionate to their relative numbers in the academic community. This aspect of the strategic plan has not been studied yet. One approach is to encourage high risk/high reward (transformative) research especially for MCF.

Assessing the Impact of the Broader Impacts Review Criterion

CHE engaged a research contractor, AIR, Inc., to conduct a pilot study. Forty-five CHE awards were chosen randomly and the contents of the proposals, review materials, annual and final reports were studied. Significant methodology issues were identified, making it difficult to draw clear conclusions from this pilot. The study was brought to the attention of the National Science Board in December 2009 as an example of one approach towards this challenging problem.

Upcoming 2010 Proposal Deadlines

**For a full list of deadlines please visit <http://www.nsf.gov/chemistry>*

Research Experiences for Undergraduates (REU) (NSF 09-598)	Full Proposal: August 25
Research Coordination Networks (RCN) (NSF 10-566)	Full Proposal: August 18
Science of Science and Innovation Policy (SciSIP) (NSF 10-054)	Full Proposal: September 9
International Research Fellowship Program (NSF 06-582)	Full Proposal: September 14
Industry/University Cooperative Research Centers Program (NSF 09-565)	Full Proposal: September 25
Integrative Graduate Education and Research Traineeship Program (NSF 10-523)	Full Proposal: September 30
Graduate Research Fellowship Program (GRFP) (NSF 09-603)	Full Proposal: Early November
Chemical Catalysis (PD-09-6884)	Full Proposal: November 30
Chemical Measurement and Imaging (PD 09-6880)	Full Proposal: November 30
Chemical Structure, Dynamics, and Mechanisms (PD 09-6879)	Full Proposal: November 30
Chemical Synthesis (PD 09-6878)	Full Proposal: November 30
Chemistry of Life Processes (PD 09-6883)	Full Proposal: November 30
Environmental Chemical Sciences (PD 09-6882)	Full Proposal: November 30
Macromolecular, Supramolecular, and Nanochemistry (PD 09-6885)	Full Proposal: November 30
Theory, Models and Computational Methods (TMC) (PD 09-6881)	Full Proposal: November 30
Research in Undergraduate Institutions (NSF 00-144)	Full Proposal: Varies by Program (November 30 for CHE)
Grant Opportunities for Academic Liaison with Industry (GOALI) (NSF 10-580)	Full Proposal: Varies by Program (November 30 for CHE)

Immediate Opening for an IPA Program Director position!

The Division of Chemistry is seeking an IPA Program Director with strong BIO expertise, especially needed for the Chemistry of Life Processes program. As an IPA position, the candidate must hold a senior faculty position or be a government lab researcher currently in a distinguished position. This candidate must be able to start no later than January 2011, but preferably earlier than January.

If you are interested in this position, please contact Zeev Rosenzweig, Program Director for the Environmental Chemical Science program, at zrosenzw@nsf.gov.

From *Notable Funding Opportunities* on page 6

A supplemental funding opportunity exists for any active NSF-supported research project in good standing to disseminate research findings and promote the general public's STEM learning, especially understanding of and engagement with cutting-edge research findings and methodologies. **Communicating Research to Public Audiences (CRPA)** proposals are supported by the Informal Science Education program in the Directorate for Education & Human Resources and are accepted anytime. CRPA proposals should clearly describe the NSF-funded research upon which the project is based, the educational need that will be met, and the informal learning strategies that will be employed to engage the targeted public audiences. Collaboration between NSF-funded researchers and informal science organizations is strongly encouraged to ensure use of effective practices. CRPA proposals can be a maximum of \$150,000 and up to two years in duration. For additional information and program contacts, please see the [Informal Science Education](#) program solicitation (NSF 10-565).

From *Extraordinary Access* on page 4

Criticisms from the COV Report include:

- There is strong concern that the peer review process is not sustainable under the current restraints. The response rate of ad hoc reviewers is low, and frequently their comments are brief or merely summarize the research without evaluating it. Panels have been added as an evaluative procedure that works well in some areas, but not as well in those disciplines that are too broadly defined and where very specific expertise is required.
- The COV recommends that the division (1) reassess and update the Strategic Directions document periodically, (2) evaluate and refine the new interdisciplinary programs as needed, and (3) continue to educate the community about the new programs, for example, by broader distribution of the new brochures that describe the realignment.
- The recently introduced "PO Comments" are working very well at providing feedback to declined proposals, but there is still room for improvement to better inform PIs about how the two merit criteria are being weighted in arriving at a funding decision.

The full CHE COV Report is available at <http://www.nsf.gov/mps/advisory/cov.jsp>

NSF Update

In order to receive NSF program announcements, vacancy announcements, newsletters or other information as soon as they are published, you can subscribe to an email alert service called "National Science Foundation Update." National Science Foundation Update also includes the subscription options for content categories, such as Images and Videos, Events, and Upcoming Due Dates for Funding Opportunities. For additional information, please visit the National Science Foundation [Update page](#).

USA Science & Engineering Festival

<http://www.usasciencefestival.org/>

Festival Dates: 10/10/10 – 10/24/10
EXPO on the Washington National Mall: Sat. 10/23 & Sun. 10/24

NSF will be a partner in the inaugural USA Science and Engineering Festival – the biggest celebration of science and technology the Nation's Capitol has ever seen.

The Festival will be held in Washington, D.C. with events throughout the city with something for everyone, from the youngest children to the most established scientists. The inaugural USA Science and Engineering Festival promises to be the ultimate multi-cultural, multi-generational, multi-disciplinary celebration of science in the United States.

The culmination of the two week-long Festival will be a two-day EXPO on the Mall for the public to discover and explore the world of science.

The goal of the Festival is to increase our nation's awareness of science and engineering as well as to inspire our nation's youth to consider science-related careers. At the same time the Festival provides an opportunity to showcase the amazing science and innovation taking place throughout the United States.

Upcoming NSF Workshops

Chemical Catalysis November 2010

Upcoming NSF Days:

University of Toledo	September 21, 2010
University of Kansas	October 5, 2010
Princeton University	November 3, 2010
Louisiana Tech	November 30, 2010
Kentucky State University	December 10, 2010
University of San Diego	January 19, 2011
Texas State University At San Marcos	February 18, 2011

Upcoming Regional Grants Conferences

Salt Lake City, Utah	October 25-26, 2010
Nashville, Tennessee	March 21-22, 2011

